

IN THE CLAIMS:

Please amend the claims as shown below:

Claim 1 (currently amended): A vehicle having a rear gate opening and closing apparatus for automatically opening and closing a said rear gate of a said vehicle, said apparatus comprising:

a power source unit that produces power to actuate said rear gate;

a slider that transforms said power into a reciprocating motion and for traveling in the longitudinal direction of said vehicle;

a hinge arm provided for attachment at an upper end of said rear gate so that said rear gate is pivotally connected with a body of said vehicle;

a connecting rod that interlocks said slider and said hinge arm, said rod transmitting said reciprocating motion to said hinge arm;

a mounting base that supports said power source unit and said slider;

a mounting base installer for detachably installing said mounting base in a space formed by a rear rail, a side rail and an under roof of said vehicle; and

a gas stay, rotatably attachable to said side rail at one end thereof and attached to said hinge arm at the other end thereof, disposed at substantially the same height as and approximately in parallel with said connecting rod and extending in the longitudinal direction of the vehicle for biasing said rear gate in an opening direction, said apparatus being located in said space under said roof of said vehicle.

Claim 2 (currently amended): The vehicle apparatus according to claim 1, wherein

said mounting base is partly installable on a brace extending in the transverse direction of said vehicle.

Claim 3 (currently amended): The vehicle apparatus according to claim 1, wherein said apparatus further comprising comprises:

a clutch for disconnecting said power source unit with said slider so as to enable an operator to open or close said rear gate by hand.

Claim 4 (currently amended): The vehicle apparatus according to claim 1, wherein said apparatus further comprising comprises:

a position detector for detecting a position of said rear gate and for outputting a detection signal thereof;

a manipulator for operating an opening and closing motion of said rear gate; and

a controller for controlling said power source unit for actuating said rear gate so as to automatically open and close said rear gate based on the detection signal from said position detector.

Claim 5 (currently amended): The vehicle apparatus according to claim 4, wherein

said controller controls said power source unit for actuating said rear gate so as to control an opening and closing speed of said rear gate based on the detection signal from said position detector.

Claim 6 (currently amended): The vehicle apparatus according to claim 4, wherein

said controller controls said power source unit for actuating said rear gate so as to vary an opening speed of the rear gate so that a rotation of said rear gate in ~~an~~ the opening direction is assisted when said rear gate is in a self closing zone and the rotation in the opening direction is restricted when said rear gate is in a self opening zone.

Claim 7 (currently amended): The apparatus according to claim 4, wherein

said controller controls said power source unit for actuating said rear gate so as to vary a closing speed of the rear gate so that the rear gate is rotated in a closing direction against a biasing force of said gas stay when said rear gate is in a self-opening zone and a rotation of said rear gate in a the closing direction is restricted when said rear gate is in a self-closing zone.

Claim 8 (currently amended): The vehicle apparatus according to claim 4, wherein

said controller judges, based on said detection signal from said position detector, a fully opened condition of said rear gate when said rear gate, while performing an opening operation, is arrived at a predetermined position.

Claim 9 (currently amended): The vehicle apparatus according to claim 4, wherein

said controller judges, based on a load of said power source unit, a fully opened or closed condition of said rear gate.

Claim 10 (currently amended): The vehicle apparatus according to claim 4, wherein

said apparatus has a warning means for raising an alarm during the opening and closing motion of said rear gate.

Claim 11 (currently amended): The vehicle apparatus according to claim 4, wherein

said controller judges whether or not ~~an~~ the opening and closing motion of said rear gate is performed automatically based on a speed of said rear gate at which said rear gate is manually operated, when the speed of said rear gate, at which said rear gate is manually operated, is within a specified speed range, said controller judges that the opening and closing operation is performed automatically.

Claim 12 (currently amended): The vehicle apparatus according to claim 4, wherein said apparatus further comprising comprises:

a clutch for disconnecting said power source unit with said slider so as to enable an operator to open or close said rear gate by hand, wherein said apparatus has a handle switch for manually opening and closing said rear gate and said controller stops an automatic operation of said rear gate based on a detection signal of said handle switch and disengages said clutch.

Claim 13 (currently amended): The vehicle apparatus according to claim 4, wherein

said apparatus has a latch switch for detecting a fully closed condition of said rear gate and for outputting a detection signal and said control means initializes said position of said rear gate.

Claim 14 (withdrawn): A vehicle having an apparatus that automatically opens and closes a rear gate of said vehicle, comprising:

a drive unit installed in a space formed by a rear rail, a side rail and an under roof of said vehicle, said drive unit producing a power to actuate said rear gate;

a hinge arm rotatably attached to a vehicle body for rotatably supporting said rear gate;

a connecting rod connected to said drive unit and said hinge arm for transmitting the power of said drive unit to said hinge arm so as to rotate said hinge arm; and

a gas stay connected to said hinge arm at the end thereof and said side rail at the other end thereof for biasing said rear gate in an opening direction so as to assist the operation of said drive unit, said gas spring being disposed at substantially the same height as and in parallel with said connecting rod throughout movement of said gate.

Claim 15 (withdrawn): The vehicle according to claim 14, wherein:

said drive unit includes

a power unit module for producing the power,

a mounting base for supporting said power unit module and adapted to be attached to said rear rail, said side rail and said under roof, and

a slider connected to said connecting rod and said power unit, and traveling in said longitudinal direction along said mounting base based on the power of said power unit module.

Claim 16 (withdrawn): The vehicle according to claim 14, wherein:

said drive unit includes an attachment for installing said drive unit on a reinforcement member provided under said roof panel.

Claim 17 (currently amended): The vehicle ~~apparatus~~ according to claim 4, wherein

said controller judges₁ based on said detection signal from said position detector₁ a fully closed condition of said rear gate when said rear gate₁ while performing a closing operation₁ is arrived at a predetermined position.